Date encoding in EAC-CPF and EAD

Final status

The following table shows the overview of all decisions taken up to and including the EAC-CPF revision meeting in Berlin from 9 to 12 March 2020, the EAC-CPF team meeting on 3 April 2020 and the EAD team meeting on 20 April 2020.

Checkmarks in **orange** represent availability in EAC-CPF, checkmarks in **blue** represent availability in EAD. Attributes in green are expected to be added in one or both EAS. All attributes are optional in both EAS.

Note: Those parts documenting the conversations and decisions of each of these two team meetings have been kept in the following chapters for reference.

Attributes	<date>	<daterange>	<fromdate>	<todate>	<dataset>
@altrender	✔	✔	✔	✔	✔
@audience	✔ ✔	✔ ✔	✔ ✔	✔ ✔	✔ ✔
@calendar	✔ ✔		✔ ✔	✔ ✔	
@certainty	✔ ✔		✔ ✔	✔ ✔	
@encodinganalog	✔	✔	✔	✔	✔
@era	✔ ✔		✔ ✔	✔ ✔	
@id	✔ ✔	✔ ✔	✔ ✔	✔ ✔	✔ ✔
@languageofelement	✔ ✔	✔ ✔	✔ ✔	✔ ✔	✔ ✔
@localtype	✔ ✔	✔ ✔	✔ ✔	✔ ✔	✔ ✔
@notafter	✔ ✔		✔ ✔	✔ ✔	
@notbefore	✔ ✔		✔ ✔	✔ ✔	
@scriptofelement	✔ ✔	✔ ✔	✔ ✔	✔ ✔	✔ ✔
@standarddate	✔ ✔		✔ ✔	✔ ✔	
@status	✔ ✔		✔ ✔	✔ ✔	
@transliteration	✔ ✔	✔ ✔	✔ ✔	✔ ✔	✔ ✔

For reference

Discussed and decided during EAD Team meeting (20 April)

Formal adoption of decisions taken during EAC Team meeting (3 April)

@status

A new attribute @status is to be added to the single date elements, i.e. <date>, <fromdate>, <todate> and - possibly - <datesingle> in EAD3, to allow indication of their status as "unknown" or "open".

Decision:
Addition of @status in a new version of EAD(3) confirmed.

<daterange>

The new attribute @status for <fromdate> and <todate> enables users to specify one or both parts of a date range as "unknown" or "open". This allows users to be more precise in these types of dates and is to be favoured over the current solution of leaving either/or or even both sub-elements of <daterange> out of the EAS instance. To gently enforce the new way of encoding, it has been decided to:
- Change the schema(s) to require either <fromdate> or <todate> to be present within <daterange>, i.e. <daterange> cannot have no child elements;
- Allow for <fromdate> and <todate> to be left empty.

Decision:
Schema change in a new version of EAD(3) confirmed.

@calendar and @era

To align all single date elements (i.e. <date>, <fromdate>, <todate> and <datesingle> in EAD3), it has been decided to allow the attributes @calendar and @era, which are currently only used with <date>, in all four elements.

Decision:
Addition of @calendar and @era in a new version of EAD(3) confirmed.

<date> vs. <datesingle> in EAD3

Currently published status

While the element <date> exists in both EAS, it is currently used differently with regard to context and scope. In EAC-CPF, <date> is part of a triad of structured date encoding elements together with <daterange> and <dateset>, while in EAD3 <date> is used to capture "any dates that merit encoding [outside of the] more specific date-related elements". In its stead, EAD3 uses <datesingle> in combination with <daterange> and <dateset>.

	Parent elements
\<date\> (in EAD3)	\<abstract\>, \<archref\>, \<bibref\>, \<entry\>, \<event\>, \<item\>, \<p\>, \<part\>, \<physfacet\>, \<publicationstmt\>, \<ref\>, \<unittitle\>
\<datesingle\> (in EAD3)	\<chronitem\>, \<dataset\>, \<localcontrol\>, \<relation\>, \<unitdatestructured\>
\<date\> (in EAC-CPF, for reference)	\<chronItem\>, \<dataset\>, \<localcontrol\>, \<cpfRelation\>, \<functionRelation\>, \<resourceRelation\>, \<existDates\>, \<useDates\>, \<function\>, \<legalStatus\>, \<localDescription\>, \<mandate\>, \<occupation\>, \<place\>

Background for adding \<datesingle\> during EAD3 creation

"In EAD2002, \<date\> was used in both mixed and non-mixed content contexts, something which we tried our best to eliminate in EAD3 [to avoid - or get rid of - semantic confusion]. When we created \<unitdatestructured\>, and borrowed some of the date modelling from EAC-CPF, we felt it was inappropriate to call the element for a single date \<date\> because we had already decided to keep the EAD2002 \<date\> element available as a mixed content element, permitted in a wide range of elements and itself containing all of the common mixed content elements. We would have had a situation where the tag library would have had to advise users to use \<date\> one way in mixed content (allowing both single dates and date ranges), and another way within \<unitdatestructured\> (allowing only a single date). We also wanted to keep the same data model for the @normal attribute on \<date\>, which was not how we wanted to handle date normalization in the children of \<unitdatestructured\>. So we made the decision to differentiate the mixed content \<date\> from the structured, non-mixed content \<datesingle\>." (quote from Mike Rush, email from 2 April 2020)

Moving forward - reconciliation between EAC and EAD

Aiming at reconciliation between both current EAS, there are three options to address this:
1. **Shifting the name distinction to EAC**, i.e. using \<datesingle\> together with \<daterange\> and \<dataset\> in both EAS and using \<date\> only in EAD3;
2. **Eliminating \<date\> as a mixed content option in EAD**, i.e. not enabling anymore the encoding of any kind of dates as part of longer descriptive texts and fully adopting the EAC model by using \<date\> together with \<daterange\> and \<dataset\>;
3. **Considering a compromise, if neither of the two first options seem feasible**:
   - Renaming \<datesingle\> in EAD3 to \<date\> (thereby fully adopting the EAC model for structured dates);
   - Renaming the current mixed content element \<date\> in EAD3 to something else, e.g. \<contextualdate\> or \<genericdate\> or \<mixeddate\> or \<textualdate\>.

Decision:
- Shifting the name distinction to EAC does not seem to make much sense, seeing that EAC does only have one version of this specific single date and does not need to accommodate two versions in itself.

- Inclination to deprecate (or completely remove) the current <date> element as mixed content element and to rename the current <datesingle> to <date> to be used in the same way as in EAC-CPF
- No need for compromise option - this is only kept (see below) for documentation and in case we would need to go back on this decision for one reason or another.
- Pending question: the content model of the element in EAD3

Compromise option

The advantage of option 3 would be:
- *We could use <date> as an actually shared element for both EAS;*
- *We could still keep the mixed content option in EAD (should we decide to do so);*
- *We could furthermore keep the distinction between @standarddate (then used with <date>, <fromdate>, and <todate>) and @normal (then used with <contextualdate> or however we decide to call this element), see below.*

Backwards compatibility, while being an aspect to consider, is likely to play a minor role in a new version of EAD, given all the more general changes that are currently being considered in the context of a shared schema approach.

@normal vs. @standarddate

Due to the difference in scope and context of use for <date> respectively <datesingle> in current EAD3, there also is a difference in the attribute used for date normalisation: while <datesingle>, same as <fromdate> and <todate>, uses the attribute @standarddate to capture normalised date information, <date> - similar to <unitdate> - uses the attribute @normal instead.

According to EAD3 issue #336 the difference between these two attributes comes down to:
- *@normal allowing spans with two dates separated by a forward slash to be normalised, i.e. "2020-03-09/2020-03-12";*
- *@standarddate only allowing a single date to be normalised, i.e. only "2020-03-09".*

Hence, the questions to clarify are:
- *Is this **statement** still **correct**?*
  - *The above mentioned specification does not seem to be part of the schema, but might be dealt with via Schematron.*
- *Is this **statement** still **valid**?*
  - *For single date entry elements, it does seem to make sense to not allow a date range with the normalising attributes, while there might be good reasons to enable them in other contexts.*

Recommendation (in case the compromise option is chosen)

Implement option 3 as suggested above with the new name <contextualdate>, i.e.:

- ***Rename** the current element **<date>** in EAD3 **to <contextual-date>**;*
  - *Keep the content model for this renamed element as is, i.e. [text], <abbr>, <emph>, <expan>, <foreign>, <lb>, <ptr>, <ref>;*
  - *Keep the context in which this renamed element can be used as is, i.e. , <archref>, <bibref>, <entry>, <event>, <item>, <p>, <part>, <physfacet>, <publicationstmt>, <ref>, <unittitle>;*

- ○ *Keep the attributes for this renamed element as is (including already agreed changes), i.e. @altrender, @audience, @calendar, @certainty, @encodinganalog, @era, @id, @lang, @localtype, **@normal**, @notafter, @notbefore, @relatenencoding, @script, @transliteration;*
  - ○ *Do not add @status to this renamed element;*
  - ○ *Have this renamed element as optional and repeatable.*
- ● ***Rename** the current element **<datesingle>** in EAD3 **to <date>**, thereby creating a shared element of that name within both EAS;*
  - ○ *Review the content model with the potential aim to only allow [text] (as it is in EAC-CPF);*
  - ○ *Keep the context in which this renamed element can be used as is, i.e. in conjunction with <date-range> and <date-set> as subelement of <chron-item>, <date-set>, <local-control>, <relation> (both EAS) / <unit-date-structured> (only EAD) / <exist-dates>, <use-dates>, <function>, <legal-status>, <local-description>, <mandate>, <occupation>, <place> (only EAC);*
  - ○ *Keep the attributes for this renamed element as is (including already agreed changes), i.e. @altrender, @audience, @calendar, @certainty, @encodinganalog, @era, @id, @lang, @localtype, @notafter, @notbefore, @relatenencoding, @script, **@standarddate**, @status, @transliteration;*
  - ○ *Have this renamed element with different availability depending on the context.*

Discussed and decided during EAC Team meeting (3 April)

Encoding dates in the EAS

Main group of <*date*> elements

There are currently six elements in total to encode dates in the EAS:
- Elements to capture a single date entry, i.e. <date>, <datesingle> (only in EAD3), <fromdate> and <todate>;
- Wrapper elements for a series of single date entries, i.e. <daterange> and <dateset>.

Attributes for <*date*> elements

Currently published status for wrapper elements

Checkmarks in **orange** represent availability in EAC-CPF, checkmarks in **blue** represent availability in EAD. All attributes are optional on both EAS.

Attributes	<daterange>	<dateset>
@altrender	✔	✔
@audience	✔	✔
@(xml:)id	✔ ✔	✔ ✔
@(xml:)lang	✔ ✔	✔ ✔
@localtype	✔ ✔	✔ ✔
@script	✔	✔

Expected status for wrapper elements

The following table is an update of the above including decisions taken so far up to and including the meeting in Berlin from 9 to 12 March. TS-EAS' EAD team had not had a meeting afterwards at the time of writing, hence any changes listed below for EAD3 are only assumed for now and will need to be confirmed during the next team call.
Checkmarks in **orange** represent availability in EAC-CPF, checkmarks in **blue** represent availability in EAD. Attributes in green are expected to be added in one or both EAS. All attributes are optional on both EAS.

Attributes	<daterange>	<dateset>
@altrender	✔ *but pending review re potential removal from EAD3*	✔ *but pending review re review potential removal from EAD3*
@audience	✔ ✔	✔ ✔

Attributes	\<daterange\>	\<dateset\>
@encodinganalog	✔ ✔	✔ ✔
@id	✔ ✔	✔ ✔
@lang	✔ ✔	✔ ✔
@localtype	✔ ✔ *but pending review re changing back to @type*	✔ ✔ *but pending review re changing back to @type*
@relatedencoding	✔ ✔	✔ ✔
@script	✔ ✔	✔ ✔
@transliteration	✔ ✔	✔ ✔

Pending questions for wrapper elements

#70 suggest to add the new attribute @status with the values "unknown" and "open" to the single date entry elements \<date\>, \<fromdate\>, and \<todate\> in EAC-CPF, which - in return - would be expected to also be added to these elements in EAD3 in the context of a future (minor or major) revision.

The questions with regard to the wrapper elements, especially \<daterange\>, are:

- Should **@status** also be **enabled with \<daterange\> and/or \<dateset\>** to allow for an indication of unknown/open ended on this higher level?
- If @status were added to the wrapper elements, are the intended values "unknown" and "open" sufficient or **would we need more detailed values**? I.e. would we use:
  - "unknownstart"
  - "unknownend"
  - "openstart"
  - "openend"

Decision (3 April 2020):
- Do not add @status to \<daterange\> nor \<dateset\>
- Change the schema to require either \<fromdate\> or \<todate\> to be present within \<daterange\>, i.e. \<daterange\> cannot have no child elements
- Allow for \<fromdate\> and \<todate\> to be left empty

Currently published status for single date entry elements

Checkmarks in **orange** represent availability in EAC-CPF, checkmarks in **blue** represent availability in EAD. All attributes are optional on both EAS.

Attributes	\<date\>	\<fromdate\>	\<todate\>	\<datesingle\>
@altrender	✔	✔	✔	✔
@audience	✔	✔	✔	✔

Attributes	<date>	<fromdate>	<todate>	<datesingle>
@calendar	blue ✔			
@certainty	blue ✔	blue ✔	blue ✔	
@encodinganalog	blue ✔			
@era	blue ✔			
@(xml:)id	orange ✔ blue ✔	orange ✔ blue ✔	orange ✔ blue ✔	blue ✔
@(xml:)lang	orange ✔ blue ✔	orange ✔ blue ✔	orange ✔ blue ✔	blue ✔
@localtype	orange ✔ blue ✔	orange ✔ blue ✔	orange ✔ blue ✔	blue ✔
@normal	blue ✔			
@notafter	orange ✔	orange ✔ blue ✔	orange ✔ blue ✔	blue ✔
@notbefore	orange ✔	orange ✔ blue ✔	orange ✔ blue ✔	blue ✔
@script	blue ✔	blue ✔	blue ✔	blue ✔
@standarddate	orange ✔	orange ✔ blue ✔	orange ✔ blue ✔	blue ✔

Expected status for single date entry elements

The following table is an update of the above including decisions taken so far up to and including the meeting in Berlin from 9 to 12 March, plus one decision from the virtual meeting on 3 April 2020. TS-EAS' EAD team had not had a meeting afterwards at the time of writing, hence any changes listed below for EAD3 are only assumed for now and will need to be confirmed during the next team call.

Checkmarks in **orange** represent availability in EAC-CPF, checkmarks in **blue** represent availability in EAD. Attributes in green are expected to be added in one or both EAS. All attributes are optional on both EAS.

Attributes	<date>	<fromdate>	<todate>	<datesingle>
@altrender	blue ✔ *but pending review re potential removal from EAD3*	blue ✔ *but pending review re potential removal from EAD3*	blue ✔ *but pending review re potential removal from EAD3*	blue ✔ *but pending review re potential removal from EAD3*
@audience	orange ✔ blue ✔	orange ✔ blue ✔	orange ✔ blue ✔	blue ✔
@calendar	orange ✔ blue ✔	orange ✔ blue ✔	orange ✔ blue ✔	blue ✔
@certainty	orange ✔ blue ✔	orange ✔ blue ✔	orange ✔ blue ✔	blue ✔

Attributes	<date>	<fromdate>	<todate>	<datesingle>
@encodinganalog	✔ ✔	✔ ✔	✔ ✔	✔
@era	✔ ✔	✔ ✔	✔ ✔	✔
@id	✔ ✔	✔ ✔	✔ ✔	✔
@lang	✔ ✔	✔ ✔	✔ ✔	✔
@localtype	✔ ✔	✔ ✔	✔ ✔	✔
@normal	✔			
@notafter	✔ ✔	✔ ✔	✔ ✔	✔
@notbefore	✔ ✔	✔ ✔	✔ ✔	✔
@relatedencoding	✔ ✔	✔ ✔	✔ ✔	✔
@script	✔ ✔	✔ ✔	✔ ✔	✔
@standarddate	✔	✔ ✔	✔ ✔	✔
@status	✔ ✔	✔ ✔	✔ ✔	✔
@transliteration	✔ ✔	✔ ✔	✔ ✔	✔

Pending questions for single date entry elements

@calendar and @era

In EAD3, the element <date> includes the attributes @calendar and @era to encode the "system of reckoning time" and the "period during which years are numbered and dates reckoned".

As it does not do any harm and might be useful to have, it is suggested to also **enable these two attributes with the other single date entry elements** across both EAS.

Decision (3 April 2020):
- Add @calendar and @era to all single date entry elements within both EAS (table above has been updated accordingly)

@normal vs. @standarddate

Given the more general context to this question, i.e. the topic of <date> vs. <datesingle>, it **does not seem useful to decide the question of the attributes without looking at the question of the elements**. It is hence **suggested to refer the overall topic to the EAD team** and revisit based on a more solid proposal how to deal with these two elements.

Decision (3 April 2020):
- Refer the general question of <date> vs <datesingle> back to EAD team, including the question with regard to @normal vs @standarddate
- EAC team would mainly need to keep in mind that this is pending finalisation for now